

Applicants : Michael Wayne Graham and Robert Norman Rice
Serial No. : 10/759,841
Filed : January 15, 2004
Page 2 of 27 of April 15, 2008 Amendment

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-171. (Canceled)

172. (New) A genetic construct comprising:

- a first nucleotide sequence of 20-30 consecutive nucleotides identical in sequence to a region of a target gene encoding a viral DNA polymerase, a viral RNA polymerase or a viral coat protein in a mammalian cell;

- a second nucleotide sequence of 20-30 consecutive nucleotides complementing the first nucleotide sequence;

- a stuffer fragment which consists of nucleotides and which is between and links the first and second nucleotide sequences;

- a promoter operable in the mammalian cell; and

- a transcription termination sequence active in the mammalian cell,

wherein the first nucleotide sequence, the stuffer fragment, the second nucleotide sequence, the promoter and the transcription termination sequence are in the same nucleic acid, and

wherein the first nucleotide sequence, the stuffer fragment and the second nucleotide sequence are all placed operably under the control of the promoter and the transcription termination sequence.

173. (New) The genetic construct of claim 172, wherein the number of each of the first nucleotide sequences, second nucleotide sequences, stuffer fragments, promoter, and

Applicants : Michael Wayne Graham and Robert Norman Rice
Serial No. : 10/759,841
Filed : January 15, 2004
Page 3 of 27 of April 15, 2008 Amendment

transcription termination sequences in the genetic construct is two.

174. (New) The genetic construct of claim 172, wherein the number of each of the first nucleotide sequences, second nucleotide sequences, stuffer fragments, promoter, and transcription termination sequences in the genetic construct is greater than two.
175. (New) The genetic construct of claim 172, wherein the nucleotide sequences are 30 nucleotides long.
176. (New) The genetic construct of claim 172, wherein the region of the target gene is in an exon.
177. (New) The genetic construct of claim 172, wherein the target gene is from a lentivirus.
178. (New) The genetic construct of claim 172, wherein the target gene is from an immunodeficiency virus.
179. (New) The genetic construct of claim 172, wherein the target gene is from a single-stranded (+) RNA virus.
180. (New) The genetic construct of claim 172, wherein the target gene is a transgene in the mammalian cell.
181. (New) The genetic construct of claim 172, wherein the stuffer fragment is a sequence of nucleotides 10-50 nucleotides in length.
182. (New) The genetic construct of claim 172, wherein the stuffer fragment is a sequence of nucleotides 50-100

Applicants : Michael Wayne Graham and Robert Norman Rice
Serial No. : 10/759,841
Filed : January 15, 2004
Page 4 of 27 of April 15, 2008 Amendment

nucleotides in length.

183. (New) The genetic construct of claim 172, wherein the stuffer fragment is a sequence of nucleotides 100-500 nucleotides in length.

184. (New) The genetic construct of claim 172, wherein the total length of the genetic construct is no more than 0.5-2.0 kilobases.

185. (New) The genetic construct of claim 172, wherein the genetic construct is in a virus particle.

186. (New) The genetic construct of claim 172, wherein the genetic construct is in a liposome.

187. (New) The genetic construct of claim 172, wherein the genetic construct is integrated into the genome of the mammalian cell.

188. (New) A mammalian cell comprising:

- a first nucleotide sequence of 20-30 consecutive nucleotides identical in sequence to a region of a target gene encoding a viral DNA polymerase, a viral RNA polymerase or a viral coat protein in the mammalian cell;

- a second nucleotide sequence of 20-30 consecutive nucleotides complementing the first nucleotide sequence;

- a stuffer fragment which consists of nucleotides and which is between and links the first and second nucleotide sequences;

- a promoter operable in the mammalian cell; and

- a transcription termination sequence active in the

Applicants : Michael Wayne Graham and Robert Norman Rice
Serial No. : 10/759,841
Filed : January 15, 2004
Page 5 of 27 of April 15, 2008 Amendment

mammalian cell,

wherein the first nucleotide sequence, the stuffer fragment, the second nucleotide sequence, the promoter and the transcription termination sequence are in the same nucleic acid, and

wherein the first nucleotide sequence, the stuffer fragment and the second nucleotide sequence are all placed operably under the control of the promoter and the transcription termination sequence.

189. (New) The mammalian cell of claim 188, wherein the nucleotide sequences are 30 nucleotides long.
190. (New) The mammalian cell of claim 188, wherein the region of the target gene is in an exon.
191. (New) The mammalian cell of claim 188, wherein the target gene is from a lentivirus.
192. (New) The mammalian cell of claim 188, wherein the target gene is from an immunodeficiency virus.
193. (New) The mammalian cell of claim 188, wherein the target gene is from a single-stranded (+) RNA virus.
194. (New) The mammalian cell of claim 188, wherein the target gene is a transgene in the mammalian cell.
195. (New) The mammalian cell of claim 188, wherein the stuffer fragment is a sequence of nucleotides 10-50 nucleotides in length.
196. (New) The mammalian cell of claim 188, wherein the stuffer

Applicants : Michael Wayne Graham and Robert Norman Rice
Serial No. : 10/759,841
Filed : January 15, 2004
Page 6 of 27 of April 15, 2008 Amendment

fragment is a sequence of nucleotides 50-100 nucleotides in length.

197. (New) The mammalian cell of claim 188, wherein the stuffer fragment is a sequence of nucleotides 100-500 nucleotides in length.

198. (New) The mammalian cell of claim 188, wherein the total length of the genetic construct is no more than 0.5-2.0 kilobases.

199. (New) The mammalian cell of claim 188, wherein the first nucleotide sequence, the second nucleotide sequence, the stuffer fragment, the promoter and the transcript termination sequence are integrated into the genome of the mammalian cell.

200. (New) An isolated mammalian cell, tissue or organ, comprising:

- a first nucleotide sequence of 20-30 consecutive nucleotides identical in sequence to a region of a target gene encoding a viral DNA polymerase, a viral RNA polymerase or a viral coat protein in the mammalian cell;

- a second nucleotide sequence of 20-30 consecutive nucleotides complementing the first nucleotide sequence;

- a stuffer fragment which consists of nucleotides and which is between and links the first and second nucleotide sequences;

- a promoter operable in the mammalian cell; and

- a transcription termination sequence active in the mammalian cell,

- wherein the first nucleotide sequence, the stuffer

Applicants : Michael Wayne Graham and Robert Norman Rice
Serial No. : 10/759,841
Filed : January 15, 2004
Page 7 of 27 of April 15, 2008 Amendment

fragment, the second nucleotide sequence, the promoter and the transcription termination sequence are in the same nucleic acid, and

wherein the first nucleotide sequence, the stuffer fragment and the second nucleotide sequence are all placed operably under the control of the promoter and the transcription termination sequence.

201. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the nucleotide sequences are 30 nucleotides long.
202. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the region of the target gene is in an exon.
203. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the target gene is from a lentivirus.
204. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the target gene is from an immunodeficiency virus.
205. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the target gene is from a single-stranded (+) RNA virus.
206. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the target gene is a transgene in the mammalian cell.
207. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the stuffer fragment is a sequence of

Applicants : Michael Wayne Graham and Robert Norman Rice
Serial No. : 10/759,841
Filed : January 15, 2004
Page 8 of 27 of April 15, 2008 Amendment

nucleotides 10-50 nucleotides in length.

208. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the stuffer fragment is a sequence of nucleotides 50-100 nucleotides in length.
209. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the stuffer fragment is a sequence of nucleotides 100-500 nucleotides in length.
210. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the total length of the genetic construct is no more than 0.5-2.0 kilobases.
211. (New) The isolated mammalian cell, tissue or organ of claim 200, wherein the first nucleotide sequence, the second nucleotide sequence, the stuffer fragment, the promoter and the transcription termination sequence are integrated into the genome of the isolated mammalian cell, tissue or organ.